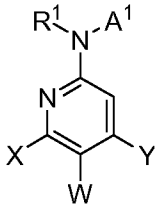
Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

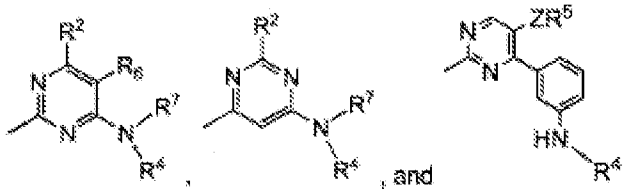
Listing of Claims:

1. (currently amended) A compound of the formula I:



wherein:

A^1 is a monocyclic ring system selected from:



, and

wherein:

R^1 is, in each instance, independently, hydrogen, C_1-C_6 alkyl, C_1-C_6 alkenyl, C_1-C_6 acyl, aryloxycarbonyl, alkyloxycarbonyl, or trialkylsilyl;

R^2, ~~R^4~~, R^5, R^8, R^9, R^{10} and R^{11} are, in each instance, independently selected from hydrogen, C_1-C_{10} alkyl, C_1-C_{10} alkyl amino, C_3-C_7 cycloalkyl, aryl, heteroaryl, and heterocyclyl;

R^4 is, in each instance, independently selected from hydrogen, C_1-C_{10} alkyl, C_3-C_7 cycloalkyl, and heterocyclyl;

R^6 is independently, in each instance, selected from hydrogen, halogen, nitrile, nitro, C_1-C_8 alkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, alkylcarbonyl, alkoxycarbonyl, C_3-C_7 cycloalkyl, nitro, OR^8, SR^8, NR^8R^9, $N(O)R^8R^9$, $P(O)(OR^8)(OR^9)$, $(CR^8R^9)_nNR^{10}R^{11}$, COR^8, $(CR^8R^9)_nC(O)R^{10}$, CO_2R^8, $CONR^8R^9$, $C(O)NR^8SO_2R^9$, $NR^8SO_2R^9$, $C(O)NR^8OR^9$, $S(O)_nR^8$, $SO_2NR^8R^9$, $(CR^8R^9)_nP(O)(OR^{10})(OR^{11})$, $(CR^8R^9)_n$-aryl, $(CR^8R^9)_n$-heteroaryl, $-T(CH_2)_mQR^8$, $-C(O)T(CH_2)_mQR^8$, $NR^8C(O)T(CH_2)_mQR^8$, and $-CR^8=CR^9C(O)R^{10}$;

R^7 is independently, in each instance, hydrogen, C_1-C_{10} acyl, alkyloxycarbonyl, aryloxycarbonyl, C_1-C_8 alkyl, or C_2-C_8 alkenyl,

R^{12} is independently, in each instance, hydrogen, C_1-C_{10} acyl, arylalkyl, alkylamino, arylamino, or alkylamino;

R^8 and R^9 may optionally form a carbocyclic group containing 3-7 members, up to four of which are optionally heteroatoms independently selected from oxygen, sulfur, and nitrogen, wherein the carbocyclic group is unsubstituted or substituted with one, two, or three groups said groups in each instance independently selected from halogen, hydroxy, hydroxyalkyl, nitrile, lower alkyl, lower alkoxy, alkoxycarbonyl, alkylcarbonyl, alkylcarbonylamino, aminoalkyl, trifluoromethyl, N-hydroxyacetamide, trifluoromethylalkyl, amino, or mono or dialkylamino, $(CH_2)_nC(O)NR^{10}R^{11}$, and $O(CH_2)_nC(O)OR^{10}$;

T is, in each instance, independently, O, S, NR^9, $N(O)R^9$, or CR^9R^{10};

Q is, in each instance, independently, O, S, NR^9, $N(O)R^9$, CO_2, $O(CH_2)_n$-heteroaryl, $O(CH_2)_nS(O)_mR^9$, or (CH_2)-heteroaryl;

X and Y are in each instance independently selected from hydrogen, halogen, nitrile, C_1-C_6 alkyl, C_1-C_6 alkylcarbonyl, C_1-C_6 alkoxycarbonyl, nitro, OR^8, SR^8, NR^8R^9, $N(O)R^8R^9$, $P(O)(OR^8)(OR^9)$, $(CR^8R^9)_nNR^{10}R^{11}$, COR^8, $(CR^8R^9)_nC(O)R^{10}$, CO_2R^8, $CONR^8R^9$, $C(O)NR^8SO_2R^9$, $NR^8SO_2R^9$, $C(O)NR^8OR^9$, $S(O)_nR^8$, $SO_2NR^8R^9$, $(CR^8R^9)_nP(O)(OR^{10})(OR^{11})$, $(CR^8R^9)_n$-aryl, $(CR^8R^9)_n$-heteroaryl, $-T(CH_2)_mQR^8$, $-C(O)T(CH_2)_mQR^8$, $NR^8C(O)T(CH_2)_mQR^8$, and $-CR^8=CR^9C(O)R^{10}$;

W is selected from hydrogen, halogen, C_1-C_8 alkyl, C_3-C_7 cycloalkyl, C_1-C_8 alkoxy, C_1-C_8 alkoxyalkyl, C_1-C_8 haloalkyl, C_1-C_8 hydroxyalkyl, C_2-C_8 alkenyl, C_2-C_8 alkynyl, nitrile, nitro, OR^8, SR^8, NR^8R^9, $N(O)R^8R^9$, $P(O)(OR^8)(OR^9)$, $(CR^8R^9)_nNR^{10}R^{11}$, COR^8, $(CR^8R^9)_nC(O)R^{10}$, CO_2R^8, $CONR^8R^9$, $C(O)NR^8SO_2R^9$, $NR^8SO_2R^9$, $C(O)NR^8OR^9$, $S(O)_nR^8$, $SO_2NR^8R^9$, $(CR^8R^9)_nP(O)(OR^{10})(OR^{11})$, $(CR^8R^9)_n$-aryl, $(CR^8R^9)_n$-heteroaryl, $-T(CH_2)_mQR^8$, $-C(O)T(CH_2)_mQR^8$, $NR^8C(O)T(CH_2)_mQR^9$, and $–CR^8=CR^9C(O)R^{10}$;

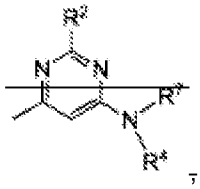
W and one of X or Y may optionally form an aromatic ring containing up to three heteroatoms and optionally substituted by up to 4 groups independently selected from halogen, hydroxy, hydroxyalkyl, lower alkyl, lower alkoxy, alkoxycarbonyl, alkylcarbonyl, alkylcarbonylamino, and aminoalkyl, aminoalkylcarbonyl, trifluoromethyl, trifluoromethylalkyl, trifluoromethylalkylaminoalkyl, amino, mono- or dialkylamino, N-hydroxyacetamido, aryl, heteroaryl, carboxyalkyl, nitrile, $NR^8SO_2R^9$, $C(O)NR^8R^9$, $NR^8C(O)R^9$, $C(O)OR^8$, $C(O)NR^8SO_2R^9$, $(CH_2)_nS(O)_nR^8$, $(CH_2)_n$-heteroaryl, $O(CH_2)_n$-heteroaryl, $(CH_2)_nC(O)NR^8R^9$, $O(CH_2)_nC(O)OR^8$, $(CH_2)_nSO_2NR^8R^9$, and $C(O)R^8$;

m is an interger of from 1-6;

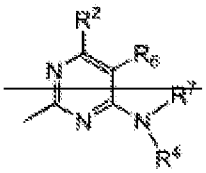
n is an interger of from 0-6; or

a pharmaceutically acceptable salt ~~thereof;~~ thereof.

~~provided that when A^4 is~~

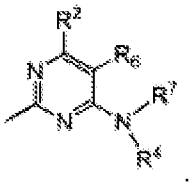


~~R^2 is C_4-C_{40} alkyl and R^7 is hydrogen, then R^4 is not a heteroaryl, and when A^1 is~~



~~and X and Y are hydrogen, then W is not bromine.~~

2. (previously presented) A compound of Claim 1, wherein A^1 is



3. (original) A compound of claim 1 wherein R^1 and R^2 are independently, in each instance, hydrogen.

4. (original) A compound according to claim 1 wherein R^4 is alkyl.

5. (original) A compound according to claim 1 wherein R^6 is halogen or COR^8.

6. (original) A compound according to claim 1 wherein W is NR^8R^9.

Claims 7-8. Cancelled.

9. (original) A compound according to claim 1 wherein X and Y are hydrogen.

10. Canceled.

11. (previously presented) A compound selected from the group consisting of: 4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carbonitrile, N4-Cyclopentyl-5-nitro-N2-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,

4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carbaldehyde,
4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carboxylic acid ethyl ester,
4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carboxylic acid methyl ester,
[4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-methanol,
1-[4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-ethanone,
3-[4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-but-2-enoic acid ethyl ester,
4-Amino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carbonitrile,
5-Nitro-N2-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,
4-Amino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carbaldehyde,
4-Amino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carboxylic acid ethyl ester,
4-Amino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carboxylic acid methyl ester,
[4-Amino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-methanol,
1-[4-Amino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-ethanone,
3-[4-Amino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-but-2-enoic acid ethyl ester,
4-Cyclopentylamino-2-(5-pyrrolidin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carbonitrile,
N2-[5-(3-Amino-pyrrolidin-1-yl)-pyridin-2-yl]-N4-cyclopentyl-5-nitro-pyrimidine-2,4-diamine,
4-Cyclopentylamino-2-(5-morpholin-4-yl-pyridin-2-ylamino)-pyrimidine-5-carbaldehyde,
4-Cyclopentylamino-2-(3,4,5,6-tetrahydro-2H-[1,3']bipyridinyl-6'-ylamino)-pyrimidine-5-carboxylic acid ethyl ester,
4-Cyclopentylamino-6-methyl-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carboxylic acid methyl ester,
{2-[5-(Bis-methoxymethyl-amino)-pyridin-2-ylamino]-4-cyclopentylamino-pyrimidin-5-yl}-methanol,
1-[4-Benzylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-ethanone,
4-[4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-pent-3-en-2-one,
4-Amino-2-(pyridin-2-ylamino)-pyrimidine-5-carbonitrile,
5-Nitro-N2-pyridin-2-yl-pyrimidine-2,4-diamine,
4-Amino-2-(pyridin-2-ylamino)-pyrimidine-5-carbaldehyde,
4-Amino-2-(pyridin-2-ylamino)-pyrimidine-5-carboxylic acid ethyl ester,

5-Bromo-N2-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,
[4-Amino-2-(5-morpholin-4-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-methanol,
1-[4-Amino-2-(5-morpholin-4-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-ethanone,
[6-(5-Acetyl-4-amino-pyrimidin-2-ylamino)-pyridin-3-yloxy]-acetic acid,
4-Cyclopentylamino-2-(4-hydroxymethyl-5-pyrrolidin-1-yl-pyridin-2-ylamino)-pyrimidine-5-carbonitrile,
N2-[5-(3-Amino-pyrrolidin-1-yl)-6-chloro-pyridin-2-yl]-N4-cyclopentyl-5-nitro-pyrimidine-2,4-diamine,
2-(5-Bromo-pyridin-2-ylamino)-4-cyclopentylamino-pyrimidine-5-carbaldehyde,
4-Cyclopentylamino-2-(1H-pyrrolo[3,2-b]pyridin-5-ylamino)-pyrimidine-5-carboxylic acid ethyl ester,
4-Cyclopentylamino-2-(4,6-dichloro-5-piperazin-1-yl-pyridin-2-ylamino)-6-methyl-pyrimidine-5-carboxylic acid methyl ester,
2-(2-{5-[Bis-(2-methoxy-ethyl)-amino]-pyridin-2-ylamino}-4-cyclopentylamino-pyrimidin-5-yl)-2-methyl-propan-1-ol,
1-[4-Phenylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-ethanone,
4-[4-(3-Hydroxy-cyclopentylamino)-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-pent-3-en-2-one,
4-[5-Cyano-2-(pyridin-2-ylamino)-pyrimidin-4-ylamino]-cyclohexanecarboxylic acid,
2-(4-Amino-5-nitro-pyrimidin-2-ylamino)-isonicotinic acid,
4-Amino-6-methyl-2-(pyridin-2-ylamino)-pyrimidine-5-carbaldehyde,
5-Iodo-N2-pyridin-2-yl-pyrimidine-2,4-diamine,
N-[5-Bromo-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-4-yl]-acrylamide,
N2-(5-Piperazin-1-yl-pyridin-2-yl)-5-prop-1-ynyl-pyrimidine-2,4-diamine,
5-[2-(4-Fluoro-phenyl)-ethyl]-N2-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,
[6-(4-Amino-5-propenyl-pyrimidin-2-ylamino)-pyridin-3-yloxy]-acetic acid,
5-Bromo-N4-cyclopentyl-N2-(5-pyrrolidin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,
N2-[5-(3-Amino-pyrrolidin-1-yl)-6-chloro-pyridin-2-yl]-5-bromo-N4-cyclopentyl-pyrimidine-2,4-diamine,
5-Bromo-N4-cyclopentyl-N2-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,
5-Bromo-N4-cyclopentyl-N2-(4,6-dichloro-5-piperazin-1-yl-pyridin-2-yl)-6-methyl-pyrimidine-2,4-diamine,
N2-{5-[Bis-(2-methoxy-ethyl)-amino]-pyridin-2-yl}-5-bromo-N4-cyclopentyl-pyrimidine-2,4-diamine,
5-Bromo-N4-phenyl-N2-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,
3-[5-Bromo-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-4-ylamino]-cyclopentanol,

N4-Cyclopentyl-5-iodo-N2-(5-pyrrolidin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,
N2-[5-(3-Amino-pyrrolidin-1-yl)-6-chloro-pyridin-2-yl]-N4-cyclopentyl-5-iodo-pyrimidine-2,4-diamine,
N4-Cyclopentyl-5-iodo-N2-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine,
N4-Cyclopentyl-5-iodo-N2-(1H-pyrrolo[3,2-b]pyridin-5-yl)-pyrimidine-2,4-diamine,
4-[6-(5-Bromo-4-cyclopentylamino-pyrimidin-2-ylamino)-pyridin-3-yl]-piperazine-1-carboxylic acid tert-butyl ester,
4-[6-(4-Cyclopentylamino-5-formyl-pyrimidin-2-ylamino)-pyridin-3-yl]-piperazine-1-carboxylic acid tert-butyl ester,
4-[6-(5-Acetyl-4-cyclopentylamino-pyrimidin-2-ylamino)-pyridin-3-yl]-piperazine-1-carboxylic acid tert-butyl ester,
2-[5-(4-tert-Butoxycarbonyl-piperazin-1-yl)-pyridin-2-ylamino]-4-cyclopentylamino-pyrimidine-5-carboxylic acid ethyl ester,
N-Cyclopentyl-N'-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-4,6-diamine,
N-Isopropyl-N'-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-4,6-diamine,
4-[6-(6-Cyclopentylamino-pyrimidin-4-ylamino)-pyridin-3-yl]-piperazine-1-carboxylic acid tert-butyl ester,
N-[5-(3-Amino-pyrrolidin-1-yl)-pyridin-2-yl]-N'-cyclopentyl-pyrimidine-4,6-diamine,
4-{6-[4-Cyclopentylamino-5-(1-methyl-3-oxo-but-1-enyl)-pyrimidin-2-ylamino]-pyridin-3-yl}-piperazine-1-carboxylic acid tert-butyl ester,
1-[4-Cyclopentylamino-2-(5-piperazin-1-yl-pyridin-2-ylamino)-pyrimidin-5-yl]-ethanone,
[4-(5-Ethyl-2-methylamino-pyridin-4-yl)-pyrimidin-2-yl]-(5-morpholin-4-yl-pyridin-2-yl)-amine,
[5-Methoxy-4-(2-methylamino-pyridin-4-yl)-pyrimidin-2-yl]-(5-morpholin-4-yl-pyridin-2-yl)-amine, and
5-Fluoro-N4-isopropyl-N2-(5-piperazin-1-yl-pyridin-2-yl)-pyrimidine-2,4-diamine;

or a pharmaceutically acceptable salt thereof.

Claims 12-17. Cancelled.